

## Louisiana Healthy Homes and Childhood Lead Poisoning Prevention Program Surveillance System Report, 2015

Prepared by:

Ngoc Huynh, MD, MPH

Program Epidemiologist

Cheryl Harris, MPH Program Administrator

Ann Johnson-Bludsaw, LMSW

**Patient Care Coordinator** 

Trina Evans Williams, MPH

**Program Coordinator** 

## **Executive Summary**

The surveillance component of the Louisiana Healthy Homes and Childhood Lead Poisoning Prevention Program (LHHCLPPP), the Healthy Homes and Lead Poisoning Surveillance System (HHLPSS), collects information about blood lead tests conducted on children between the ages of 6 and 72 months who reside in Louisiana. HHLPSS provides blood lead test results to other state agencies including Environmental Epidemiology, WIC, Head Start Centers and local health departments as needed, and upon request to third parties for research and planning.

Since 2000, the LHHCLPPP has released a comprehensive annual report on statewide childhood blood lead testing which includes a detailed breakdown of blood lead data by age, jurisdiction, blood lead level, and the trend of blood lead levels over time. The current report presents the childhood blood lead test results for calendar year (CY) 2015. All numbers are based on blood lead testing (venous or capillary) on children 6-72 months of age.

## **CY 2015 Surveillance Highlights:**

- During CY 2015, a total of 69,519 children were tested among 378,985 children 6-72 months of age. This represents 18.4% of children under 6 tested as identified in the 2015 American community survey, 5-year estimate for Louisiana population. This was an increase of 6,675 children tested compared to 62,844 (18.3%) during CY 2014. This represents a 1% increase in testing from CY 14 to CY 15.
- During CY 2015, 42% of 1-year-olds (n=64,353) and 29% of 2-year-olds (n=63,632) were tested for lead poisoning.
- During CY 2015, of the 69,519 children tested for blood lead statewide, 923 (1.3%) were found to have initial blood lead level (BLL)  $\geq$ 10 $\mu$ g/dL. During CY 2015, 2,582 children had an initial blood lead level of 5-9.9 $\mu$ g/dL.
- While there has been an increase in the number of children tested in 2015 compared to 2014, there has been a decrease in the number of children found with elevated blood lead levels (Figure 1).
- Winn Parish had the highest testing rate (35.8%), followed by Avoyelles Parish (35.1%), Natchitoches Parish (33.5%), Madison Parish (33.2%), and Concordia Parish (33.1%).
- Caldwell Parish had the highest cumulative testing rate for children at 1 year and 2 years of age at 58.9% (Table 3).
- Eighty-seven percent (87%) of the addresses were geo-coded at the longitude, latitude level. The parish assignment is based on: 1) County-FIPS as determined by geocoding, 2) Child's zip code address and 3) the original parish name if it was included in the address information.
- In 2015 HHLPSS received blood lead reports from 78 establishments (laboratories, clinics, medical offices and hospital labs). About 89% of reports received electronically were from 69 establishments and the remaining 11% were received in hard copy through fax or mail from the other nine establishments. The average reporting time, from the time the sample was drawn to the time the results were entered into the HHLPSS database was about 14 days. The average time for reporting elevated BLL ≥10µg/dL was approximately 48 hours.
- Louisiana Administrative Code 48:V§ 7005 requires blood lead testing for all children ages 6-72 months who spend more than 10 hours a week in Louisiana.

#### Overview

Exposure to lead is still the most significant and widespread environmental hazard for children in Louisiana, although substantial reduction in lead exposure and lead poisoning has been achieved. While the rate of children with elevated BLLs in Louisiana has decreased dramatically over the years, LHHCLPPP continues to capture cases of elevated BLLs annually.

The Centers for Disease Control and Prevention (CDC) has concluded that even low blood lead levels can cause lifelong health effects. As of January 2012, CDC uses a reference level of  $5\mu g/dL$  to identify children who have been exposed to lead and who require case management.

#### **Statistical Report**

In CY 2015, a total of 69,519 children 6-72 months of age were tested for lead exposure statewide. Table 1 provides a summary for statewide statistics of blood lead screening in 2015.

#### **Findings**

The overall proportion of children with BLL  $\geq 5\mu g/dL$  declined in 2015 (Figure 1). Additionally, the proportion of children with BLL  $\geq 10\mu g/dL$  also decreased from 1.8% in 2014 to 1.3% in 2015. This represents a 24% decrease in lead poisoning (Table 2 and Figure 2).

The decline in lead exposure is demonstrated by the decline in the percent of children with elevated blood lead levels (Figure 1).

Appendix A provides a breakdown of blood lead testing and the status of children by age groups of under 2 years and 3 years and older by high-risk parishes in 2015. For detailed breakdowns of blood lead data, the reader is referred to the supplementary data tables.

Table 1: Calendar Year (CY) 2015 –Number and Percent of Children Tested aged 6-72 months N=378,985

		Percent
		(%) of
	Number of	total
Item	tests	population
Number of tests	69,519	18.3
Age		
Under 1 Year	1416	2
1 Year	27032	39.1
2 Years	18338	26.5
3 Years	7368	10.6
4 Years	7282	10.5
5 Years	2686	3.9
6 Years	5397	7.3
Gender		
Female	34039	49
Male	35146	50.6
Unknown	334	0.4
Blood Lead Level (µg/dL)		
<5	66014	95
5-9.9	2582	3.7
10-14.9	576	0.8
15-19.9	222	0.3
≥20	125	0.2
Mean BLL	1.66	
<b>Blood Specimens</b>		
Capillary	50198	72.2
Venous	6466	9.3
Unknown	12855	18.5

Table 2: Summary of the Numbers of Children with Elevated Blood Lead levels by Parish 2015 Data

F				2015	Data						
Parish	Population					201	5 Da	ıta			
	of										
	Children[1]	Total	%	5-	10-	15-	<u> </u>	≥10	≥5	% ≥5	
	6 and under	Tested	tested	9.9	14.9	19.9	20	≥10	∠2 μg	μg	% ≥10 µg
	under	(n)	tested	7.7		ıg/dL	20		/dL	/dL	/dL
Acadia	5883	527	9.0	18	5	0	6	11	29	5.5	2.1
Allen	1593	375	23.5	12	1	0	0	1	13	3.5	0.3
Ascension	10383	1057	10.2	7	2	1	1	4	11	1.0	0.4
Assumption	1302	253	19.4	9	1	0	0	1	10	4.0	0.4
Avoyelles	3237	1136	35.1	35	6	3	1	10	45	4.0	0.9
Beauregard	2941	381	13.0	13	1	4	5	10	23	6.0	2.6
Bienville	1216	93	7.6	4	0	0	0	0	4	4.3	0.0
Bossier	10769	1274	11.8	33	4	2	3	9	42	3.3	0.7
Caddo	21699	2998	13.8	152	48	23	17	88	240	8.0	2.9
Calcasieu	15953	2229	14.0	91	20	5	3	28	119	5.3	1.3
Caldwell	631	207	32.8	13	1	0	0	1	14	6.8	0.5
Cameron	420	54	12.9	3	0	0	0	0	3	5.6	0.0
Catahoula	719	185	25.7	6	3	2	0	5	11	5.9	2.7
Claiborne	1024	193	18.8	19	3	2	1	6	25	13.0	3.1
Concordia	1709	568	33.2	17	2	0	0	2	19	3.3	0.4
De Soto	2463	342	13.9	15	4	2	2	8	23	6.7	2.3
East Baton	34901	4247	12.2	190	36	18	12	66	256	6.0	
Rouge											1.6
East Carroll	728	77	10.6	3	2	0	0	2	5	6.5	2.6
East	1464	323	22.1	3	2	0	0	2	5	1.5	0.4
Feliciana	20.60	422	147	1.0	1	0	0	1	10	4.5	0.6
Evangeline	2868	423	14.7	18	1	0	0	1	19	4.5	0.2
Franklin	2029	662	32.6	32	4	0	0	0	32	4.8	0.0
Grant	1774	303	17.1	9	0	0	0	0	9	3.0	0.0
Iberia	6583	414	6.3	11	1	3	2	6	17	4.1	1.4
Iberville	2594	300	11.6	5 7	5	3	1	9	14	4.7	3.0
Jackson	1208	275	22.8	-	2	1	0	3	10	3.6	1.1
Jefferson Davis	2729	480	17.6	26	9	4	2	15	41	8.5	3.1
Jefferson	33938	6020	17.7	161	35	13	9	57	218	3.6	0.9
La Salle	1204	303	25.2	12	3	0	0	3	15	5.0	1.0
Lafayette	19369	1233	6.4	20	6	0	2	8	28	2.3	0.6
Lafourche	7549	1817	24.1	32	22	9	6	37	69	3.8	2.0
Lincoln	3283	1060	32.3	15	3	1	1	5	20	1.9	0.5
Livingston	11551	1205	10.4	45	20	6	3	29	74	6.1	2.4
Livingston	11331	1203	10.7	1.5	20	J		,	, –	0.1	∠.+

Madison	1217	404	33.2	14	3	0	0	3	17	4.2	0.7

(Contd.)

(Contd.)	1	1									
Parish	Population					2015	Data	a			
	of										
	Children[1]	Total	Total	5-	10-	15-	>	≥10	≥5	%	
	6 and	Tested	tested	9.9	14.9	19.9	20		μg	≥ <b>5</b>	
	under	(n)	(%)			μg /	dL		/dl	μg	% ≥10 µg
		. ,	` '			10				/dl	/dl
Morehouse	2548	572	22.4	23	4	1	0	5	28	4.9	0.9
Natchitoches	3158	1059	33.5	15	10	7	3	20	35	3.3	1.9
Orleans	27376	6963	25.4	602	129	39	7	175	777	11.2	2.5
Ouachita	13451	2903	21.6	139	26	13	5	44	183	6.3	1.5
Plaquemines	2416	219	9.1	2	1	1	0	2	4	1.8	0.9
Pointe Coupee	1880	393	20.9	10	5	2	1	8	18	4.6	2.0
Rapides	10901	2697	24.7	59	12	5	5	22	81	3.0	0.8
Red River	842	122	14.5	5	0	0	0	0	5	4.1	0.0
Richland	2057	555	27.0	6	4	2	1	7	13	2.3	1.3
Sabine	2265	466	20.6	20	3	0	0	3	23	4.9	0.6
St. Bernard	4047	941	23.3	17	2	0	0	2	19	2.0	0.2
St. Charles	4312	708	16.4	12	5	0	0	5	17	2.4	0.7
St. Helena	853	188	22.0	9	0	0	0	0	9	4.8	0.0
St. James	1859	487	26.2	11	1	1	1	3	14	2.9	0.6
St. John the								7	21	2.3	
Baptist	3634	918	25.3	14	7	0	0				0.8
St. Landry	8023	753	9.4	25	5	1	1	7	32	4.2	0.9
St. Martin	4484	263	5.9	1	0	0	0	0	1	0.4	0.0
St. Mary	4462	536	12.0	27	7	0	1	8	35	6.5	1.5
St. Tammany	17711	2531	14.3	39	9	5	3	17	56	2.2	0.7
Tangipahoa	10547	1203	11.4	121	12	6	3	21	142	11.8	1.7
Tensas	485	197	40.6	6	3	0	0	3	9	4.6	1.5
Terrebonne	9458	1063	11.2	31	11	3	0	14	45	4.2	1.3
Union	1914	517	27.0	14	4	3	0	7	21	4.1	1.4
Vermilion	5151	711	13.8	6	1	1	0	2	8	1.1	0.3
Vernon	5732	421	7.3	7	0	0	1	1	8	1.9	0.2
Washington	3929	644	16.4	23	5	2	2	9	32	5.0	1.4
Webster	3178	364	11.5	12	7	0	0	7	19	5.2	1.9
West Baton								1	4	2.4	
Rouge	2378	168	7.1	3	1	0	0				0.6
West Carroll	955	195	20.4	3	0	0	0	0	3	1.5	0.0
West Feliciana	946	165	17.4	7	2	1	0	3	10	6.1	1.8
Winn	1102	395	35.8	29	5	1	0	6	35	8.9	1.5

[1]: U.S Census Bureau, 2014 American Community Survey, 5 year estimates

Figure 1
Blood Lead Distribution of Children 6-72 Months Tested for Lead in 2014 and 2015

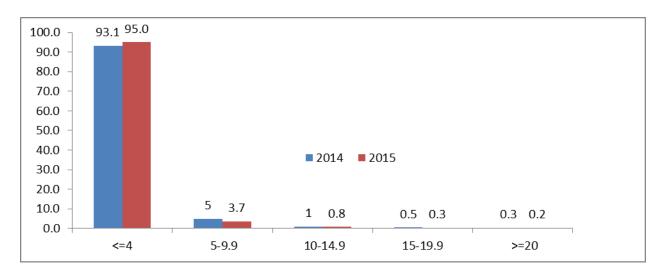
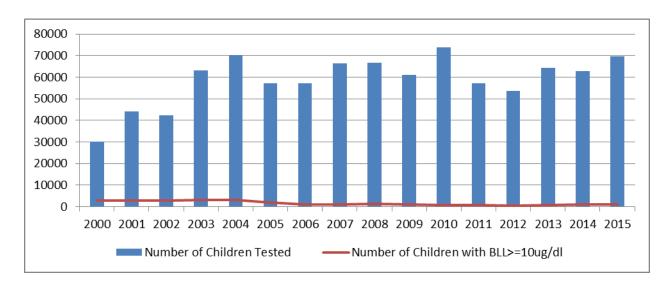


Figure 2 Number of Children 6-72 Months tested for Lead and Number Reported to have BLL  $\ge\!10~\mu g$  /dL: 2000-2015



8
7
6
5
4
3
2
1
0
2011 2012 2013 2014 2015

— Percent of Children with BLL 5-9.9ug/dl

Figure 3
Percent of Children 6-72 Months Tested for Lead with BLL 5-9.9 µg /dL: 2012-2015

#### **Statewide Activities to Eliminate Childhood Lead Poisoning**

1. Universal Screening: A primary goal of LHHCLPPP is to identify children who may be at risk of lead exposure, so that preventive actions can be implemented. Because of their hand-mouth behavior, children ages 1 and 2 are most likely to be exposed to lead. To that end, the State of Louisiana called for universal screening to require blood lead testing for all children 6-72 months old, especially children at ages 1 and 2. 29.8% children ages 1 and 2 were tested for lead in 2014, with rate as high as 58.9% for Caldwell parish and 53.8% for Catahoula parish (Table 3).

Table 3: Blood Lead Testing of Children 1 and 2 Years Old by Parish in 2015

Parish	1	Year Old		2 `	Years Old			Total	
	Children	Childre	n tested	Children Children Tested		Children	Children	hildren Tested	
			Percent			Percent			Percent
	Population	Number	(%)	Population	Number	(%)	Population	Number	(%)
Acadia	1167	261	22.4	1185	133	11.2	2352	394	16.8
Allen	298	158	53.0	335	115	34.3	633	273	43.1
Ascension	2046	544	26.6	2107	167	7.9	4153	711	17.1
Assumption	238	122	51.3	273	77	28.2	511	199	38.9
Avoyelles	629	392	62.3	666	266	39.9	1295	658	50.8
Beauregard	567	180	31.7	609	87	14.3	1176	267	22.7
Bienville	251	35	13.9	236	19	8.1	487	54	11.1
Bossier	2103	462	22.0	2211	319	14.4	4314	781	18.1
Caddo	4298	943	21.9	4380	782	17.9	8678	1725	19.9

Caldwell         122         98         80.3         131         51         38.9         253         149         56           Cameron         79         27         34.2         88         11         12.5         167         38         22           Catahoula         139         100         71.9         151         56         37.1         290         156         36.5           Claiborne         199         80         40.2         208         76         36.5         407         156         36.5           Concordia         331         201         60.7         352         122         34.7         683         323         44           De Soto         472         129         27.3         513         110         21.4         985         239         22           East Baton         6949         2028         29.2         7012         1586         22.6         13961         3614         25           East Feliciana         301         105         34.9         285         105         36.8         586         210         33           Evangeline         563         183         32.5         574         132 <th< th=""><th>Calcasieu</th><th>3156</th><th>1200</th><th>38.0</th><th>3231</th><th>499</th><th>15.4</th><th>6387</th><th>1699</th><th>26.6</th></th<>	Calcasieu	3156	1200	38.0	3231	499	15.4	6387	1699	26.6
Cataboula   139   100   71.9   151   56   37.1   290   156   55	Caldwell									58.9
Calabouta   139   100   71.9   151   56   37.1   290   156   55	Cameron									22.8
Claiborne	Catahoula									53.8
Concordia   331   201   60.7   352   122   34.7   683   323   47     De Soto   472   129   27.3   513   110   21.4   985   239   22     East Baton   Rouge   6949   2028   29.2   7012   1586   22.6   13961   3614   25     East Carroll   139   35   25.2   152   21   13.8   291   56   16     East Feliciana   301   105   34.9   285   105   36.8   586   210   33     Evangeline   563   183   32.5   574   132   23.0   1137   315   27     Franklin   398   111   27.9   413   109   26.4   811   220   27     Grant   349   62   17.8   362   51   14.1   711   113   15     Iberia   1301   100   7.7   1332   76   5.7   2633   176   6     Iberville   511   66   12.9   528   27   5.1   1039   93   9     Jackson   229   157   68.6   254   98   38.6   483   255   55     Jefferson   Davis   536   222   41.4   555   119   21.4   1091   341   31     Jefferson   6708   3065   45.7   6868   1676   24.4   13576   4741   34     La Salle   230   156   67.8   251   94   37.5   481   250   55     Lafayette   3841   800   20.8   3907   557   14.3   7748   1357   17     Lafourche   1499   596   39.8   1530   474   31.0   3029   1070   38     Livingston   233   89   38.2   256   74   28.9   489   163   33     Morehouse   497   208   41.9   522   160   30.7   1019   388   33     Morehouse   497   208   41.9   522   160   30.7   1019   388   33     Orleans   5435   3202   55.9   5507   2028   36.8   1942   5230   44     Plaquemines   471   126   26.8   495   114   23.0   966   240   22     Red River   159   60   37.7   177   29   16.4   336   89   22     Red River   159   60   37.7   177   29   16.4   336   89   22     Richland   398   190   47.7   425   126   29.6   823   316	Claiborne									38.3
De Soto	Concordia									47.3
Fast Baton   Rouge   6949   2028   29.2   7012   1586   22.6   13961   3614   25   25   25   25   25   25   25   2	De Soto									24.3
East Carroll         139         35         25.2         152         21         13.8         291         56         15           East Feliciana         301         105         34.9         285         105         36.8         586         210         33           Evangeline         563         183         32.5         574         132         23.0         1137         315         27           Franklin         398         111         27.9         413         109         26.4         811         220         27           Grant         349         62         17.8         362         51         14.1         711         113         16           Iberville         511         66         12.9         528         27         5.1         1039         93         9           Jackson         229         157         68.6         254         98         38.6         483         255         52           Jefferson         Davis         536         222         41.4         555         119         21.4         1091         341         31           Jefferson         Basic         256         78         251         94 <td></td>										
East Feliciana   301   105   34.9   285   105   36.8   586   210   38.5										25.9
Evangeline         563         183         32.5         574         132         23.0         1137         315         22           Franklin         398         111         27.9         413         109         26.4         811         220         27           Grant         349         62         17.8         362         51         14.1         711         113         15           Iberville         511         66         12.9         528         27         5.7         2633         176         6           Jackson         229         157         68.6         254         98         38.6         483         255         52           Jefferson         536         222         41.4         555         119         21.4         1091         341         31           Jefferson         6708         3065         45.7         6868         1676         24.4         13576         4741         32           La Salle         230         156         67.8         251         94         37.5         481         250         52           Lafourbet         3841         800         20.8         3907         557         14.3<										19.2
Franklin         398         111         27.9         413         109         26.4         811         220         27           Grant         349         62         17.8         362         51         14.1         711         113         15           Iberal         1301         100         7.7         1332         76         5.7         2633         176         6           Iberville         511         66         12.9         528         27         5.1         1039         93         9           Jackson         229         157         68.6         254         98         38.6         483         255         52           Jefferson         202         41.4         555         119         21.4         1091         341         31           Jefferson         6708         3065         45.7         6868         1676         24.4         13576         4741         34           La Salle         230         156         67.8         251         94         37.5         481         250         52           Lafayette         3841         800         20.8         3907         557         14.3         7748										35.8
Grant 349 62 17.8 362 51 14.1 711 113 15 15 16 16 16 17.8 362 51 14.1 711 113 15 15 16 16 16 17.8 362 51 14.1 711 113 15 15 16 16 17.7 18.1 18.1 18.1 18.1 18.1 18.1 18.1										27.7
Iberia										27.1
Iberville										15.9
Jackson         229         157         68.6         254         98         38.6         483         255         52           Jefferson Davis         536         222         41.4         555         119         21.4         1091         341         341         341         341         341         341         341         342         344										6.7
Jefferson Davis   536   222   41.4   555   119   21.4   1091   341   341   341   342   343   3441										9.0
Davis         536         222         41.4         555         119         21.4         1091         341         31           Jefferson         6708         3065         45.7         6868         1676         24.4         13576         4741         34           La Salle         230         156         67.8         251         94         37.5         481         250         52           Lafayette         3841         800         20.8         3907         557         14.3         7748         1357         17           Lafourche         1499         596         39.8         1530         474         31.0         3029         1070         35           Lirooln         645         192         29.8         668         142         21.3         1313         334         25           Livingston         2292         544         23.7         2324         363         15.6         4616         907         15           Madison         233         89         38.2         256         74         28.9         489         163         33           Morehouse         497         208         41.9         522         160		229	15/	68.6	254	98	38.6	483	255	52.8
La Salle 230 156 67.8 251 94 37.5 481 250 52  Lafayette 3841 800 20.8 3907 557 14.3 7748 1357 17  Lafourche 1499 596 39.8 1530 474 31.0 3029 1070 33  Lincoln 645 192 29.8 668 142 21.3 1313 334 25  Livingston 2292 544 23.7 2324 363 15.6 4616 907 15  Madison 233 89 38.2 256 74 28.9 489 163 33  Morehouse 497 208 41.9 522 160 30.7 1019 368 33  Natchitoches 619 298 48.1 645 188 29.1 1264 486 33  Orleans 5435 3202 58.9 5507 2028 36.8 10942 5230 42  Ouachita 2669 786 29.4 2711 555 20.5 5380 1341 22  Pointe Coupee 366 108 29.5 387 93 24.0 753 201 20  Rapides 2132 674 31.6 2228 438 19.7 4360 1112 22  Red River 159 60 37.7 177 29 16.4 336 89 20  Richland 398 190 47.7 425 126 29.6 823 316 33  St. Charles 843 311 36.9 882 216 24.5 1725 527 33  St. Landry 1576 348 22.1 1635 275 16.8 3211 623 115  St. Landry 1576 348 22.1 1635 275 16.8 3211 623 115  St. Landry 1576 348 22.1 1635 275 16.8 3211 623 115	Davis	536	222	41.4	555	119	21.4	1091	341	31.3
Lafayette         3841         800         20.8         3907         557         14.3         7748         1357         17           Lafourche         1499         596         39.8         1530         474         31.0         3029         1070         33           Lincoln         645         192         29.8         668         142         21.3         1313         334         25           Livingston         2292         544         23.7         2324         363         15.6         4616         907         19           Madison         233         89         38.2         256         74         28.9         489         163         33           Morehouse         497         208         41.9         522         160         30.7         1019         368         33           Natchitoches         619         298         48.1         645         188         29.1         1264         486         33           Orleans         5435         3202         58.9         5507         2028         36.8         10942         5230         47           Quachita         2669         786         29.4         2711         555 </td <td></td> <td>6708</td> <td>3065</td> <td>45.7</td> <td>6868</td> <td>1676</td> <td>24.4</td> <td>13576</td> <td>4741</td> <td>34.9</td>		6708	3065	45.7	6868	1676	24.4	13576	4741	34.9
Lafourche         1499         596         39.8         1530         474         31.0         3029         1070         36           Lincoln         645         192         29.8         668         142         21.3         1313         334         25           Livingston         2292         544         23.7         2324         363         15.6         4616         907         19           Madison         233         89         38.2         256         74         28.9         489         163         33           Morehouse         497         208         41.9         522         160         30.7         1019         368         33           Natchitoches         619         298         48.1         645         188         29.1         1264         486         33           Orleans         5435         3202         58.9         5507         2028         36.8         10942         5230         44           Quachita         2669         786         29.4         2711         555         20.5         5380         1341         22           Plaquemines         471         126         26.8         495         114 </td <td></td> <td>230</td> <td>156</td> <td>67.8</td> <td>251</td> <td>94</td> <td>37.5</td> <td>481</td> <td>250</td> <td>52.0</td>		230	156	67.8	251	94	37.5	481	250	52.0
Lincoln 645 192 29.8 668 142 21.3 1313 334 258 Livingston 2292 544 23.7 2324 363 15.6 4616 907 15 Madison 233 89 38.2 256 74 28.9 489 163 33 Morehouse 497 208 41.9 522 160 30.7 1019 368 36 Natchitoches 619 298 48.1 645 188 29.1 1264 486 36 Orleans 5435 3202 58.9 5507 2028 36.8 10942 5230 47 Ouachita 2669 786 29.4 2711 555 20.5 5380 1341 22 Plaquemines 471 126 26.8 495 114 23.0 966 240 22 Pointe Coupee 366 108 29.5 387 93 24.0 753 201 26 Rapides 2132 674 31.6 2228 438 19.7 4360 1112 26 Red River 159 60 37.7 177 29 16.4 336 89 26 Richland 398 190 47.7 425 126 29.6 823 316 36 Sabine 441 157 35.6 466 123 26.4 907 280 36 St. Bernard 781 369 47.2 837 224 26.8 1618 593 36 St. Charles 843 311 36.9 882 216 24.5 1725 527 36 St. James 361 199 55.1 383 85 22.2 744 284 38 St. James 361 199 55.1 383 85 22.2 744 284 36 St. James 361 199 55.1 383 85 22.2 744 284 36 St. James 361 199 55.1 383 85 22.2 744 284 36 St. James 361 199 55.1 383 85 22.2 744 284 36 St. Landry 1576 348 22.1 1635 275 16.8 3211 623 115	•	3841	800	20.8	3907	557	14.3	7748	1357	17.5
Livingston         2292         544         23.7         2324         363         15.6         4616         907         15           Madison         233         89         38.2         256         74         28.9         489         163         33           Morehouse         497         208         41.9         522         160         30.7         1019         368         36           Natchitoches         619         298         48.1         645         188         29.1         1264         486         38           Orleans         5435         3202         58.9         5507         2028         36.8         10942         5230         47           Quachita         2669         786         29.4         2711         555         20.5         5380         1341         24           Plaquemines         471         126         26.8         495         114         23.0         966         240         24           Pointe Coupee         366         108         29.5         387         93         24.0         753         201         26           Rapides         2132         674         31.6         2228         438 </td <td>Lafourche</td> <td>1499</td> <td>596</td> <td>39.8</td> <td>1530</td> <td>474</td> <td>31.0</td> <td>3029</td> <td>1070</td> <td>35.3</td>	Lafourche	1499	596	39.8	1530	474	31.0	3029	1070	35.3
Madison         233         89         38.2         256         74         28.9         489         163         33           Morehouse         497         208         41.9         522         160         30.7         1019         368         36           Natchitoches         619         298         48.1         645         188         29.1         1264         486         38           Orleans         5435         3202         58.9         5507         2028         36.8         10942         5230         4           Ouachita         2669         786         29.4         2711         555         20.5         5380         1341         24           Plaquemines         471         126         26.8         495         114         23.0         966         240         24           Pointe Coupee         366         108         29.5         387         93         24.0         753         201         26           Rapides         2132         674         31.6         2228         438         19.7         4360         1112         29           Red River         159         60         37.7         177         29	Lincoln	645	192	29.8	668	142	21.3	1313	334	25.4
Morehouse         497         208         41.9         522         160         30.7         1019         368         36           Natchitoches         619         298         48.1         645         188         29.1         1264         486         38           Orleans         5435         3202         58.9         5507         2028         36.8         10942         5230         4*           Ouachita         2669         786         29.4         2711         555         20.5         5380         1341         24           Plaquemines         471         126         26.8         495         114         23.0         966         240         24           Pointe Coupee         366         108         29.5         387         93         24.0         753         201         20           Rapides         2132         674         31.6         2228         438         19.7         4360         1112         29           Red River         159         60         37.7         177         29         16.4         336         89         20           Richland         398         190         47.7         425         126 <td>Livingston</td> <td>2292</td> <td>544</td> <td>23.7</td> <td>2324</td> <td>363</td> <td>15.6</td> <td>4616</td> <td>907</td> <td>19.6</td>	Livingston	2292	544	23.7	2324	363	15.6	4616	907	19.6
Natchitoches         619         298         48.1         645         188         29.1         1264         486         38           Orleans         5435         3202         58.9         5507         2028         36.8         10942         5230         4           Ouachita         2669         786         29.4         2711         555         20.5         5380         1341         2           Plaquemines         471         126         26.8         495         114         23.0         966         240         2           Pointe Coupee         366         108         29.5         387         93         24.0         753         201         26           Rapides         2132         674         31.6         2228         438         19.7         4360         1112         25           Red River         159         60         37.7         177         29         16.4         336         89         26           Richland         398         190         47.7         425         126         29.6         823         316         36           St. Bernard         781         369         47.2         837         224	Madison	233	89	38.2	256	74	28.9	489	163	33.3
Orleans         5435         3202         58.9         5507         2028         36.8         10942         5230         47           Ouachita         2669         786         29.4         2711         555         20.5         5380         1341         24           Plaquemines         471         126         26.8         495         114         23.0         966         240         24           Pointe Coupee         366         108         29.5         387         93         24.0         753         201         20           Rapides         2132         674         31.6         2228         438         19.7         4360         1112         25           Red River         159         60         37.7         177         29         16.4         336         89         26           Richland         398         190         47.7         425         126         29.6         823         316         33           Sabine         441         157         35.6         466         123         26.4         907         280         36           St. Bernard         781         369         47.2         837         224	Morehouse	497	208	41.9	522	160	30.7	1019	368	36.1
Ouachita         2669         786         29.4         2711         555         20.5         5380         1341         24           Plaquemines         471         126         26.8         495         114         23.0         966         240         24           Pointe Coupee         366         108         29.5         387         93         24.0         753         201         26           Rapides         2132         674         31.6         2228         438         19.7         4360         1112         29           Red River         159         60         37.7         177         29         16.4         336         89         26           Richland         398         190         47.7         425         126         29.6         823         316         36           Sabine         441         157         35.6         466         123         26.4         907         280         36           St. Bernard         781         369         47.2         837         224         26.8         1618         593         36           St. Helena         111         81         73.0         123         42         <	Natchitoches	619	298	48.1	645	188	29.1	1264	486	38.4
Plaquemines         471         126         26.8         495         114         23.0         966         240         24           Pointe Coupee         366         108         29.5         387         93         24.0         753         201         26           Rapides         2132         674         31.6         2228         438         19.7         4360         1112         25           Red River         159         60         37.7         177         29         16.4         336         89         26           Richland         398         190         47.7         425         126         29.6         823         316         36           Sabine         441         157         35.6         466         123         26.4         907         280         36           St. Bernard         781         369         47.2         837         224         26.8         1618         593         36           St. Charles         843         311         36.9         882         216         24.5         1725         527         36           St. James         361         199         55.1         383         85         <	Orleans	5435	3202	58.9	5507	2028	36.8	10942	5230	47.8
Pointe Coupee         366         108         29.5         387         93         24.0         753         201         20           Rapides         2132         674         31.6         2228         438         19.7         4360         1112         29           Red River         159         60         37.7         177         29         16.4         336         89         26           Richland         398         190         47.7         425         126         29.6         823         316         36           Sabine         441         157         35.6         466         123         26.4         907         280         36           St. Bernard         781         369         47.2         837         224         26.8         1618         593         36           St. Charles         843         311         36.9         882         216         24.5         1725         527         36           St. Helena         111         81         73.0         123         42         34.1         234         123         55           St. John the         Baptist         701         352         50.2         752	Ouachita	2669	786	29.4	2711	555	20.5	5380	1341	24.9
Rapides         2132         674         31.6         2228         438         19.7         4360         1112         228           Red River         159         60         37.7         177         29         16.4         336         89         26           Richland         398         190         47.7         425         126         29.6         823         316         38           Sabine         441         157         35.6         466         123         26.4         907         280         30           St. Bernard         781         369         47.2         837         224         26.8         1618         593         36           St. Charles         843         311         36.9         882         216         24.5         1725         527         36           St. Helena         111         81         73.0         123         42         34.1         234         123         53           St. James         361         199         55.1         383         85         22.2         744         284         36           St. Landry         1576         348         22.1         1635         275 <td< td=""><td>Plaquemines</td><td>471</td><td>126</td><td>26.8</td><td>495</td><td>114</td><td>23.0</td><td>966</td><td>240</td><td>24.8</td></td<>	Plaquemines	471	126	26.8	495	114	23.0	966	240	24.8
Red River         159         60         37.7         177         29         16.4         336         89         26           Richland         398         190         47.7         425         126         29.6         823         316         38           Sabine         441         157         35.6         466         123         26.4         907         280         30           St. Bernard         781         369         47.2         837         224         26.8         1618         593         36           St. Charles         843         311         36.9         882         216         24.5         1725         527         36           St. Helena         111         81         73.0         123         42         34.1         234         123         52           St. James         361         199         55.1         383         85         22.2         744         284         38           St. Landry         1576         348         22.1         1635         275         16.8         3211         623         19	Pointe Coupee	366	108	29.5	387	93	24.0	753	201	26.7
Richland     398     190     47.7     425     126     29.6     823     316     38       Sabine     441     157     35.6     466     123     26.4     907     280     30       St. Bernard     781     369     47.2     837     224     26.8     1618     593     30       St. Charles     843     311     36.9     882     216     24.5     1725     527     30       St. Helena     111     81     73.0     123     42     34.1     234     123     52       St. James     361     199     55.1     383     85     22.2     744     284     38       St. John the Baptist     701     352     50.2     752     208     27.7     1453     560     38       St. Landry     1576     348     22.1     1635     275     16.8     3211     623     19	Rapides	2132	674	31.6	2228	438	19.7	4360	1112	25.5
Sabine         441         157         35.6         466         123         26.4         907         280         36           St. Bernard         781         369         47.2         837         224         26.8         1618         593         36           St. Charles         843         311         36.9         882         216         24.5         1725         527         36           St. Helena         111         81         73.0         123         42         34.1         234         123         52           St. James         361         199         55.1         383         85         22.2         744         284         38           St. John the Baptist         701         352         50.2         752         208         27.7         1453         560         38           St. Landry         1576         348         22.1         1635         275         16.8         3211         623         19	Red River	159	60	37.7	177	29	16.4	336	89	26.5
St. Bernard     781     369     47.2     837     224     26.8     1618     593     36       St. Charles     843     311     36.9     882     216     24.5     1725     527     36       St. Helena     111     81     73.0     123     42     34.1     234     123     52       St. James     361     199     55.1     383     85     22.2     744     284     38       St. John the Baptist     701     352     50.2     752     208     27.7     1453     560     38       St. Landry     1576     348     22.1     1635     275     16.8     3211     623     19	Richland	398	190	47.7	425	126	29.6	823	316	38.4
St. Charles         843         311         36.9         882         216         24.5         1725         527         36           St. Helena         111         81         73.0         123         42         34.1         234         123         52           St. James         361         199         55.1         383         85         22.2         744         284         38           St. John the Baptist         701         352         50.2         752         208         27.7         1453         560         38           St. Landry         1576         348         22.1         1635         275         16.8         3211         623         19	Sabine	441	157	35.6	466	123	26.4	907	280	30.9
St. Charles         843         311         36.9         882         216         24.5         1725         527         36           St. Helena         111         81         73.0         123         42         34.1         234         123         52           St. James         361         199         55.1         383         85         22.2         744         284         38           St. John the Baptist         701         352         50.2         752         208         27.7         1453         560         38           St. Landry         1576         348         22.1         1635         275         16.8         3211         623         19		781								36.7
St. Helena     111     81     73.0     123     42     34.1     234     123     52       St. James     361     199     55.1     383     85     22.2     744     284     38       St. John the Baptist     701     352     50.2     752     208     27.7     1453     560     38       St. Landry     1576     348     22.1     1635     275     16.8     3211     623     19										30.6
St. James     361     199     55.1     383     85     22.2     744     284     38       St. John the Baptist     701     352     50.2     752     208     27.7     1453     560     38       St. Landry     1576     348     22.1     1635     275     16.8     3211     623     19		111			123					52.6
St. John the Baptist     701     352     50.2     752     208     27.7     1453     560     38       St. Landry     1576     348     22.1     1635     275     16.8     3211     623     19			199			85				38.2
St. Landry 1576 348 22.1 1635 275 16.8 3211 623 19	St. John the	701	352					1453	560	38.5
										19.4
										16.1
										16.5
	•									29.8
	-									15.7

Tensas	89	54	60.7	105	37	35.2	194	91	46.9
Terrebonne	1867	589	31.5	1920	372	19.4	3787	961	25.4
Union	372	220	59.1	394	141	35.8	766	361	47.1
Vermilion	1012	331	32.7	1049	259	24.7	2061	590	28.6
Vernon	1106	144	13.0	1178	133	11.3	2284	277	12.1
Washington	766	307	40.1	805	181	22.5	1571	488	31.1
Webster	605	146	24.1	667	140	21.0	1272	286	22.5
West Baton Rouge	451	106	23.5	499	88	17.6	950	194	20.4
West Carroll	181	101	55.8	205	58	28.3	386	159	41.2
West Feliciana	174	66	37.9	202	64	31.7	376	130	34.6
Winn	201	104	51.7	239	95	39.7	440	199	45.2
Statewide	74532	27032	36.3	77941	18338	23.5	152473	45370	29.8

2. WIC Testing: Pilot testing for lead poisoning began in Region 1 (Orleans) on Oct. 1, 2014. Testing is done on children who are initially certified and those who are recertified for WIC services. Approximately 80% of children screened were first time testers.

Table 4: Blood Lead Testing in WIC clinics from Jan. 1, 2015 through Dec. 31, 2015

Tuble 11 Blood Bead Testing III 1110 enimes II on	T	1	2	3	≥4	
Clinic Name	Total tested	year old	years old	years old	years old	Retest
Children's Medical Center Gretna WIC	92	81	11	0	0	0
Crescent City WIC Services	71	29	24	15	3	17
Daughters Of Charity Carrollton	347	290	34	8	15	40
Daughters Of Charity St. Cecilia	5	4	1	0	0	1
Ida Hymel WIC Clinic	0	0	0	0	0	0
Jefferson Parish Marrero Health Unit	38	31	7	0	0	2
Jefferson Parish Metairie Health Unit	25	18	7	0	0	4
New Orleans East Family Health	0	0	0	0	0	0
St. Bernard WIC Clinic	6	6	0	0	0	1
St. Charles Community Health Center	107	101	6	0	0	7
Edna Pilsbury WIC Clinic	2	2	0	0	0	0
Children's Medical Center WIC Clinic In Westwego	116	73	41	2	0	17

- 3. Healthy Louisiana/Medicaid Eligible Children: Another group of children at risk of lead poisoning are children on Medicaid Assistance program. Upon a memorandum of understanding between the Louisiana (LA) Lead program and LA Medicaid program, Medicaid data will be provided on annual basis to LA Lead program to be matched with children blood lead data. A detailed of report of blood lead testing of Medicaid children will be developed and disseminated statewide.
- 4. Case Management/Environmental Investigations: LHHCLPPP has well-established case management guidelines and environmental protocols for follow-up of children with elevated BLLs. Tables 6 and 7 reflect the number of cases that received follow-up and the number that received environmental investigations.

Table 6 - Management for Follow-Up Blood Lead Testing Chart

Jan.1, 2015 to I	Dec. 31, 2015
Blood Lead Level (µg/dL)	Number of Cases
	Receiving Follow-up
5-9	2334
40.44	
10-14	441
15-19	173
20-29	102
30-44	55
30-44	33
45-69	5
>70	0
TOTAL	3110

**Table 7- Sources of Lead Based on Environmental Investigations** 

	2012	2013	2014	2015	Totals
Number of Referrals	23	18	21	48	110
Number of Referrais	23	10	21	40	110
Number of Investigations	13	13	12	37	75
Doint	12	0	12	20	64
Paint	13	9	12	30	64
Soil	9	9	6	13	37
Dust	9	6	7	25	47
Other	0	1( fish sinker)	0	0	1

5. Data Quality: Since 2009, LHHCLPPP has successfully implemented and used the CDC-based Healthy Homes and Lead Poisoning Surveillance System (HHLPSS) to collect, compile and track information about blood lead tests conducted and lead hazards found among child residents of Louisiana. Through the use of HHLPSS, LHHCLPPP has expanded its surveillance system into a comprehensive, population-based system by continued collection of all blood lead tests conducted on children between the ages of 6

and 72 months and providing environmental investigations and recording the source of lead poisoning for children with venous BLLs  $\geq 10 \mu g/dL$ . The LHHCLPPP staff makes an effort to further improve data quality with respect to completeness, timeliness and accuracy.

Staff keeps track on a daily basis of laboratory reporting to make sure laboratories are reporting all blood lead tests at least biweekly. Staff also checks the completeness of data with respect to the child's and guardian's names, address, telephone number, and the child's Medicaid number.

# Table 8 Blood Lead Levels of Children 6-72 Months by Major Age Group and High-Risk Parishes in 2015

State					BLL 5-9	.9 μg /dl	BLLs≥	10 μg /dl
Target Parishes	Population	า	Total tests	Percent (%) tests	Number	Percent (%)	Number	Percent (%)
	Under 3 years old	152473	45370	29.8	1602	3.5	618	1.4
Louisiana	3 years and older	226512	24149	10.7	980	4.1	305	1.3
Acadia	Under 3 years old	2352	394	16.8	11	2.8	11	2.8
	3 years and older	3591	133	3.7	7	5.3	0	0.0
	Under 3 years old	1176	267	22.7	11	4.1	4	1.5
Beauregard	3 years and older	1765	114	6.5	2	1.8	1	0.9
Doddrogard	Under 3 years old	8687	1725	19.9	81	4.7	35	2.0
Caddo	3 years and older	13021	1273	9.8	71	5.6	53	4.2
Gaaac	Under 3 years old	253	149	58.9	5	3.4	1	0.7
Caldwell	3 years and older	378	58	15.3	8	13.8	0	0.0
	Under 3 years old	290	156	53.8	3	1.9	1	0.6
Catahoula	3 years and older	429	29	6.8	3	10.3	4	13.8
	Under 3 years old	407	156	38.3	12	7.7	4	2.6
Claiborne	3 years and older	617	37	6.0	7	18.9	2	5.4
	Under 3 years old	985	239	24.3	11	4.6	6	2.5
De Soto	3 years and older	1478	103	7.0	4	3.9	2	1.9
	Under 3 years old	291	56	19.2	1	1.8	2	3.6
East Carroll	3 years and older	437	21	4.8	2	9.5	0	0.0
	Under 3 years old	1039	93	9.0	4	4.3	4	4.3
Iberville	3 years and older	1555	207	13.3	1	0.5	5	2.4
Jefferson	Under 3 years old	1091	341	31.3	19	5.6	15	4.4
Davis	3 years and older	1638	139	8.5	7	5.0	0	0.0
	Under 3 years old	3029	1070	35.3	25	2.3	17	1.6
Lafourche	3 years and older	4520	747	16.5	7	0.9	20	2.7
	Under 3 years old	4616	907	19.6	34	3.7	23	2.5
Livingston	3 years and older	6935	298	4.3	11	3.7	6	2.0
	Under 3 years old	1264	486	38.4	11	2.3	10	2.1
Natchitoches	3 years and older	1894	573	30.3	4	0.7	10	1.7
	Under 3 years old	10942	5230	47.8	389	7.4	129	2.5
Orleans	3 years and older	16434	1733	10.5	213	12.3	46	2.7
Pointe	Under 3 years old	753	201	26.7	6	3.0	6	3.0
Coupee	3 years and older	1127	192	17.0	4	2.1	2	1.0
	Under 3 years old	1785	294	16.5	12	4.1	3	1.0
St Mary	3 years and older	2677	242	9.0	15	6.2	5	2.1
	Under 3 years old	5220	817	15.7	90	11.0	11	1.3
Tangipahoa	3 years and older	5327	386	7.2	31	8.0	10	2.6
	Under 3 years old	194	91	46.9	3	3.3	2	2.2
Tensas	3 years and older	291	106	36.4	3	2.8	1	0.9
	Under 3 years old	1272	286	22.5	7	2.4	5	1.7
Webster	3 years and older	1906	78	4.1	5	6.4	2	2.6
	Under 3 years old	440	199	45.2	20	10.1	4	2.0
Winn	3 years and older	662	196	29.6	9	4.6	2	1.0

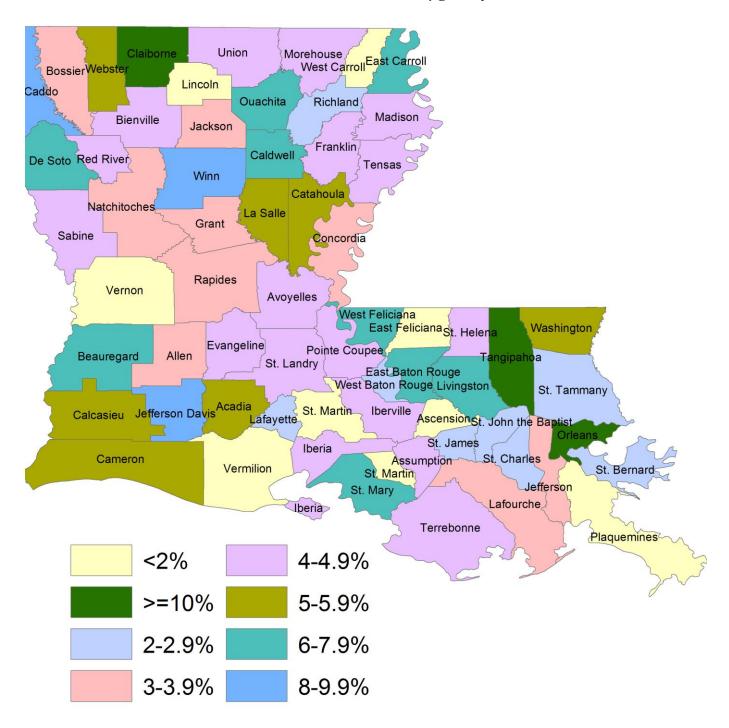
#### Union Claiborne Morehouse West Carroll East Carroll BossierWebster Lincoln Caddo Ouachita Richland Madison Bienville Jackson Franklin Caldwell De Soto Red River **Tensas** Winn Catahoula Natchitoches La Salle Grant Sabine Concordia Rapides Vernon Avoyelles West Feliciana East Feliciana St. Helena Washington Evangeline Pointe Coupee Beauregard Allen Tangipahoa St. Landry East Baton Rouge West Baton Rouge Livingston St. Tammany Jefferson Davis Acadia Iberville St. Martin Calcasieu Ascension St. John the Baptist Lafayette Orleans St. James Iberia Cameron Assumption St. Charles Vermilion St. Bernar St. Martin Jefferson St. Mary Lafourche Iberia Terrebonne Plaquemines 10-14.9% 25-29.9% 15-19.9% >=30%

<10%

Percent of Children Screening for Blood Lead Levels by Parish – 2015 Data

20-24.9%

#### Percent of Children with Blood Lead Levels ≥5µg/dl by Parish – 2015 Data



### Percent of Children with Blood Lead levels ≥10 μg/dl by Parish – 2015 Data

